Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1121bd

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
NEWS	4	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAplus
NEWS	5	FEB 05	German (DE) application and patent publication number format changes
NEWS	6	MAR 03	MEDLINE and LMEDLINE reloaded
NEWS	7	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS	8	MAR 03	FRANCEPAT now available on STN
NEWS	9	MAR 29	Pharmaceutical Substances (PS) now available on STN
NEWS	10	MAR 29	WPIFV now available on STN
NEWS	11	MAR 29	No connect hour charges in WPIFV until May 1, 2004
NEWS	12	MAR 29	New monthly current-awareness alert (SDI) frequency in RAPRA
NEWS	13	APR 26	PROMT: New display field available
NEWS	14	APR 26	IFIPAT/IFIUDB/IFICDB: New super search and display field available
NEWS	15	APR 26	LITALERT now available on STN
NEWS	16	APR 27	NLDB: New search and display fields available

NEWS EXPRESS	MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 14:05:14 ON 10 MAY 2004

=> fil reg
FILE 'REGISTRY' ENTERED AT 14:08:05 ON 10 MAY 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 9 MAY 2004 HIGHEST RN 680971-82-8
DICTIONARY FILE UPDATES: 9 MAY 2004 HIGHEST RN 680971-82-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

*** YOU HAVE NEW MAIL ***
'.REGISTRY' IS DEFAULT FORMAT FOR 'REGISTRY' FILE

=> s ascorbic acid/cn
L1 2 ASCORBIC ACID/CN

=> fil caplus
FILE 'CAPLUS' ENTERED AT 14:08:23 ON 10 MAY 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 10 May 2004 VOL 140 ISS 20
FILE LAST UPDATED: 9 May 2004 (20040509/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l1/p
L2 932 L1/P

=> s continuous process
373727 CONTINUOUS
1931570 PROCESS
L3 11735 CONTINUOUS PROCESS
(CONTINUOUS(W)PROCESS)

=> s l2 and l3
L4 4 L2 AND L3

=> d tot cbib abs

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

2002:504774 Document No. 137:63425 Process for producing ascorbic acid in the presence of a sulfite. Arumugam, Bhaskar; Collins, Nick; Boyd, Brendan; Perri, Steven; Powell, Jeffery; Cushman, Michael (Eastman Chemical Company, USA). PCT Int. Appl. WO 2002051827 A1 20020704, 44 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US49859 20011221. PRIORITY: US 2000-PV257991 20001222; US 2001-PV314999 20010824.

AB The present invention comprises the use of sulfite additives to reduce discoloration of L-ascorbic acid produced from acid or aqueous solns. of 2-keto-L-gulonic acid. In one aspect, the present invention comprises a **continuous process** for producing L-ascorbic acid from an aqueous solution of 2-keto-L-gulonic acid. The use of sulfite additives reduces product stream color and improves product recovery by binding to high mol. weight reaction byproducts. In a **continuous process**, the reaction stream is separated from residual sulfite and sulfite-bound byproducts to produce a product stream enriched in aqueous ascorbic acid for recovery, and an enriched 2-keto-L-gulonic acid stream which is recycled to the reactor. The in situ use of sulfite additives during the reaction increases the overall yield of L-ascorbic acid, with no loss in selectivity of the synthesis.

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

2002:504773 Document No. 137:63424 **Continuous process** for producing l-ascorbic acid. Arumugam, Bhaskar; Collins, Nick; Macias, Transtio; Perri, Steven; Powell, Jeffery; Sink, Chester; Cushman, Michael (Eastman Chemical Company, USA). PCT Int. Appl. WO 2002051826 A1 20020704, 54 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US49609 20011221. PRIORITY: US 2000-PV257991 20001222.

AB The present invention provides methods and an apparatus for the manufacture of an L-ascorbic acid product in high yield by direct conversion of an aqueous solution containing 2-keto-L-gulonic acid by contact with an acid catalyst or under thermal self-catalyzed conditions at a conversion level that maximizes the formation of L-ascorbic acid and minimizes decomposition of the L-ascorbic acid thus formed. The separation process for L-ascorbic acid and KLG is operated in such a way that an efficient separation process allows the majority of the KLG to be recycled for further conversion. The product stream from the separation process is then subjected to a recovery step to obtain crystalline L-ascorbic acid product.

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

1997:797133 Document No. 128:47372 Mathematical modeling, automation and control of the bioconversion of sorbitol to sorbose in the vitamin C production process. I. Mathematical modeling. Bonomi, A.; Fleury, A. T.; Augusto, E. F. P.; Mattos, M. N.; Magossi, L. R. (Agrupamento de Biotecnologia - Divisao de Quimica, Instituto de Pesquisas Tecnologicas do Estado de Sao Paulo, Sao Paulo, 01064-970, Brazil). Brazilian Journal of

Chemical Engineering, 14(4), 303-308 (English) 1997. CODEN: BJCEFZ. ISSN: 0104-6632. Publisher: Associacao Brasileira de Engenharia Quimica.

AB In 1990, the Biotechnol. and the Control Systems Groups of IPT started developing a system for the control and automation of fermentation processes, applied to the oxidation of sorbitol to sorbose by the bacteria Gluconobacter oxydans, the microbial step of the vitamin C production process, that was chosen as a case study. Initially, a thirteen-parameter model was fitted to represent the batch operation of the system utilizing a nonlinear regression anal., the flexible polyhedron method. Based on these results, a model for the **continuous process** (with the same kinetic equations) was constructed and its optimum operating point obtained.

L4 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

1970:133146 Document No. 72:133146 l-Ascorbic acid production. Bogoczek, Romuald (Politechnika Slaska). Fr. Demande FR 2001090 19690926, 7 pp. (French). CODEN: FRXXBL. PRIORITY: PL 19680201 - 19681123 19681123.

AB The title compound (I) is prepared by heating a mixture of L-xylo-hexulosonic acid (II), or a derivative of II, with a cation exchanger. To 600 ml cation exchanger Zerolite 225 (III) in K form was added 1 l. 20% di-o-oisopropylidene-II acid and the mixture stirred under N and heated at just below the b.p. 7 hr. The filtered solution was concentrated under reduced pressure at 60° to a syrup, seeded with II, and kept in the cold for several days. II was centrifuged off washing with MeOH, and the filtrates seeded with I to give 70 g I, m. 186-8°. Treating the liquors and the II obtained with more III gave a further 23 g I. A solution of 4 g II in 50 ml Me3COH was treated with 30 g polystyrene-sulfonate resin Wolfatit KPS, previously dried with a mol. sieve, and refluxed 6 hr to give 3.3 g I. A **continuous process** is described in which a 10% solution of II in dioxane was passed through a column of III at a rate of 100 ml/hr to give 8.2 g I/hr.

=> d 2

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:504773 CAPLUS

DN 137:63424

TI **Continuous process** for producing l-ascorbic acid

IN Arumugam, Bhaskar; Collins, Nick; Macias, Transtio; Perri, Steven; Powell, Jeffery; Sink, Chester; Cushman, Michael

PA Eastman Chemical Company, USA

SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002051826	A1	20020704	WO 2001-US49609	20011221
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2002151726	A1	20021017	US 2001-37126	20011221
	US 6610863	B2	20030826		
	BR 2001016451	A	20030930	BR 2001-16451	20011221
	EP 1351949	A1	20031015	EP 2001-991443	20011221

```
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRAI US 2000-257991P   P    20001222
     WO 2001-US49609   W    20011221
OS   CASREACT 137:63424
RE.CNT  5     THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> log h
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    17.92      23.82

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -2.77      -2.77

 SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:12:32 ON 10 MAY 2004

Connecting via Winsock to STN



Welcome to STN International!  Enter x:x

LOGINID:sssptaul21bd

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 14:13:07 ON 10 MAY 2004
FILE 'CAPLUS' ENTERED AT 14:13:07 ON 10 MAY 2004
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> d his

     (FILE 'HOME' ENTERED AT 14:05:14 ON 10 MAY 2004)

     FILE 'REGISTRY' ENTERED AT 14:08:05 ON 10 MAY 2004
L1            2 S ASCORBIC ACID/CN

     FILE 'CAPLUS' ENTERED AT 14:08:23 ON 10 MAY 2004
L2          932 S L1/P
L3        11735 S CONTINUOUS PROCESS
L4            4 S L2 AND L3

=> s separation
L5      172760 SEPARATION

=> s separat?
L6      303732 SEPARAT?

=> fil reg
FILE 'REGISTRY' ENTERED AT 14:13:58 ON 10 MAY 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    9 MAY 2004  HIGHEST RN 680971-82-8
```

DICTIONARY FILE UPDATES: 9 MAY 2004 HIGHEST RN 680971-82-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

*** YOU HAVE NEW MAIL ***
'.REGISTRY' IS DEFAULT FORMAT FOR 'REGISTRY' FILE

=> s 2-keto-L-gulonic acid/cn
L7   1 2-KETO-L-GULONIC ACID/CN

=> fil caplus
FILE 'CAPLUS' ENTERED AT 14:14:31 ON 10 MAY 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN. Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 10 May 2004 VOL 140 ISS 20
FILE LAST UPDATED: 9 May 2004 (20040509/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

=> d his

     (FILE 'HOME' ENTERED AT 14:05:14 ON 10 MAY 2004)

     FILE 'REGISTRY' ENTERED AT 14:08:05 ON 10 MAY 2004
L1   2 S ASCORBIC ACID/CN

     FILE 'CAPLUS' ENTERED AT 14:08:23 ON 10 MAY 2004
L2   932 S L1/P
L3   11735 S CONTINUOUS PROCESS
L4   4 S L2 AND L3
L5   172760 S SEPARATION
L6   303732 S SEPARAT?

     FILE 'REGISTRY' ENTERED AT 14:13:58 ON 10 MAY 2004
L7   1 S 2-KETO-L-GULONIC ACID/CN

     FILE 'CAPLUS' ENTERED AT 14:14:31 ON 10 MAY 2004

=> s l2 (5w) l6

```
L8            0 L2 (5W) L6

=> s ascorbic acid
         74840 ASCORBIC
       3814831 ACID
L9       74005 ASCORBIC ACID
                 (ASCORBIC(W)ACID)

=> s l9 (6w) l6
L10         26 L9 (6W) L6

=> s l7 (6w) l10
           359 L7
L11          0 L7 (6W) L10

=> s l7
L12         359 L7

=> s l12 (7w) l9
L13         23 L12 (7W) L9

=> d ti tot

L13  ANSWER 1 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Enzymatic process for the manufacture of L-ascorbic acid and D-erythorbic
     acid

L13  ANSWER 2 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Production of ascorbic acid

L13  ANSWER 3 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Production of ascorbic acid

L13  ANSWER 4 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Production of ascorbic acid using yeast

L13  ANSWER 5 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Preparation of ascorbic acid metal salts and their precursors

L13  ANSWER 6 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Method for producing ascorbic acid intermediates

L13  ANSWER 7 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Production of ascorbic acid using yeast

L13  ANSWER 8 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Preparation of ascorbic acid

L13  ANSWER 9 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Roles of sodium pyrosulfite and L-cysteine hydrochloride in slowing
     discoloration of ascorbic acid injection

L13  ANSWER 10 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Production of l-ascorbic acid from 2-keto-l-gulonic acid

L13  ANSWER 11 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Intrasequential cofactor regeneration in enzymatic synthesis, particularly
     when producing vitamin C

L13  ANSWER 12 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Pathway for the anaerobic degradation of ascorbic acid in neutral
     injection

L13  ANSWER 13 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
```

TI 2-Oxogulonic acid

L13 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
TI Biosynthetic 2,5-diketogluconic acid reductase recombinant cells and expression vectors for its production, and its use in preparing 2-keto-1-gulonic acid

L13 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
TI Study of the interaction of matacil and L-ascorbic acid

L13 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
TI Analysis of mixtures of ascorbic acid with hydrate of disopropylidene-2-keto-L-gulonic acid and with 2-keto-L-gulonic acid by gas-liquid chromatography

L13 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
TI Ascorbic acid

L13 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
TI Separation of L-ascorbic acid from 2-keto-L-gulonic acid

L13 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
TI Converting hexosulosonic acid into corresponding compounds with dienol-lactone groups

L13 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
TI Separation of ascorbic acid and 2-keto-L-gulonic acid

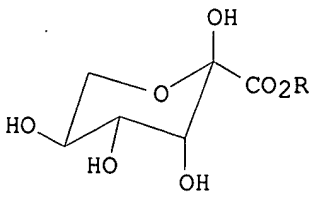
L13 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
TI Esters of 2-oxo-hexonic acids

L13 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
TI Paper chromatographic behavior of some decomposition products of vitamin C

L13 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
TI Fate of 2-keto-L-gulonic acid in rat and guinea pig

=> d 8 10 18 20 cbib abs

L13 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
1990:591848 Document No. 113:191848 Preparation of ascorbic acid. Hesse, Michael; Lermer, Helmut; Steck, Werner; Schaper, Michael (BASF A.-G., Germany). Ger. Offen. DE 3843389 A1 19900628, 6 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1988-3843389 19881223.
GI



II

AB The title compound (I) is prepared by lactonization of 2-keto-L-gulonates II (R = H, alkyl, aryl) over zeolite catalysts. Thus, II (R = H) (20 weight% aqueous solution) was passed over a pentasil-type borosilicate zeolite (94.2 weight% SiO2, 2.3 weight% B2O3) (preparation given) at WHSV of 4 h-1 at 150° under 12 bar to give 98% conversion and 44.5% yield I.

L13 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
1987:407510 Document No. 107:7510 Production of l-ascorbic acid from 2-keto-l-gulonic acid. Yodice, Richard (Lubrizol Corp., USA). PCT Int. Appl. WO 8700839 A1 19870212, 21 pp. DESIGNATED STATES: W: AU, DK, JP; RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1986-US1620 19860806. PRIORITY: US 1985-764262 19850809.
AB L-Ascorbic acid (I) was prepared in a single step with relatively high yields (>90%) by forming a substantially anhydrous slurry of 2-keto-L-gulonic acid (II)·nH2O (n = 0.1-2.0) and a surfactant in a supporting organic layer and reacting the slurry with a substantially anhydrous acid catalyst, e.g. HCl (g). Thus, 0.023 mol II·1.5 H2O was added at 65° to a solution of Me(CH2)15N+Me3 Cl- in 20 mL toluene and to the resulting slurry HCl(g) was bubbled in at 80 mL/min for 3 h to give 99% I·1/2H2O.

L13 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
1979:39204 Document No. 90:39204 Separation of L-ascorbic acid from 2-keto-L-gulonic acid. Kita, Harumi; Fukuyama, Mitsugu; Kaizu, Tetsuji (Takeda Chemical Industries, Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 53098925 19780829 Showa, 3 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1977-12613 19770207.
AB L-Ascorbic acid (I) was separated from 2-keto-L-gulonic acid (II) by selective crystallization of II from solution containing I and II at pH 4.5-7.0. Thus, a mixture of 20 g I and 20 g II in 100 mL H2O was adjusted to pH 5.0 with 30% aqueous NaOH, concentrated to 50 mL, and stored at 50° to precipitate 19.6 g II (purity 98.9%). The crystallization mother liquor was treated with cation exchange resin IR-124 (H type) and concentrated to 25 mL to precipitate 16.3 g I (purity 98.2%).

L13 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
1972:502095 Document No. 77:102095 Separation of ascorbic acid and 2-keto-L-gulonic acid. Bafna, S. L.; Patel, D. J.; Mehta, J. D. (Chem. Dep., M.S. Univ., Baroda, India). Journal of Pharmaceutical Sciences, 61(8), 1333-4 (English) 1972. CODEN: JPMSAE. ISSN: 0022-3549.
AB The separation of ascorbic and L-xylo-hexulosonic acids by mol. sorption on a column of styrene-divinylbenzene copolymer-based sulfonic acid cation-exchange resin, with the relative degree of crosslinking of four, is described.

=> d 2 3 17 cbib abs

L13 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
2002:522531 Document No. 137:78008 Production of ascorbic acid. Kumar, Manoj (USA). U.S. Pat. Appl. Publ. US 2002090689 A1 20020711, 11 pp., Cont.-in-part of U.S. Ser. No. 205,874. (English). CODEN: USXXCO. APPLICATION: US 2001-26587 20011218. PRIORITY: US 1998-205874 19981204.
AB The present invention provides for the production of ASA from yeast capable of producing ASA from KLG. The present invention provides methods for the production of ASA as well as recombinant yeast capable of producing ASA from a carbon source.

L13 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
2002:522529 Document No. 137:78007 Production of ascorbic acid. Kumar, Manoj (USA). U.S. Pat. Appl. Publ. US 2002090688 A1 20020711, 11 pp., Cont.-in-part of U.S. Ser. No. 205,874. (English). CODEN: USXXCO. APPLICATION: US 2001-26139 20011218. PRIORITY: US 1998-205874 19981204.
AB The present invention provides for the production of ascorbic acid from yeast capable of producing ascorbic acid from 2-keto-L-gulonic acid. The present invention provides methods for the production of ascorbic acid as well as recombinant yeast capable of producing ascorbic acid from a carbon

source.

L13 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
1980:180980 Document No. 92:180980 Ascorbic acid. Crawford, Thomas C. (Pfizer Inc., USA). U.S. US 4180511 19791225, 7 pp. (English). CODEN: USXXAM. APPLICATION: US 1978-945034 19780922.
AB Base-catalyzed cyclization of 2-ketogulonic acid and 2-ketogluconic acid, both prepared by borohydride reduction of 2,5-diketogluconic acid, gave ascorbic acid (I) and erythorbic acid (II), resp. Removing borate impurities before cyclization by conversion to trialkyl borate esters which are separated by azeotropic distillation with C1-3 alcs., by conversion to BF4- salts (using, e.g., NaF) which are separated by quaternary ammonium ion exchange resins, or by adsorption on solids, e.g., silica gel gave better yields of I and II.

=> log h

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	33.05	65.79

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-4.85	-7.62

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:20:17 ON 10 MAY 2004